THE

Connecticut Common School Journal

AND

ANNALS OF EDUCATION.

VOL. I. HARTFORD, FEBRUARY, 1854. No. 2.

THE TEACHER OUT OF SCHOOL.

THE regular school hours of five days in each week, for, perhaps, forty-four weeks in a year, contain but a fraction of the faithful teacher's direct labors for his school and the cause of education. The morning hours and the portion of the day remaining after his pupils have left him, he may not, ordinarily, devote to pleasure or to a manual employment, except so far as these may be made subsidiary to the promotion of his physical health or mental vigor, or to a profession unconnected with his great work as an educator of the young. Only as he has a single purpose—one aim—"pressing toward the mark for the prize of his high calling"—devoting all his energies and all his time to it, can he expect that full success after which every true teacher longs—only thus can he be a workman approved, and for whom is held in reserve the faithful teacher's recompense.

In any business or profession, the successful man is he who gives himself up to it with a devotedness and energy that are untiring—who works in it as if he were born for it only. The work of the teacher—the molder of plastic characters—the polisher of gems that may shine forever with a beauty and brightness which he helped to bring out, or reveal a dimness and darkness that shall ever tell of him—the work of him who is employed on such imperishable and precious materials, surely merits a devotion to it that is constant and unwearied.

I propose to mention briefly some of the ways in which the devoted teacher is occupied out of the school-room.

1. He who would truly teach and rightly train his pupils in their daily recitations, must regularly make fresh preparation to meet his classes. He must not only be thoroughly familiar with the topics that are to be recited and examined by each class, so as, in most studies, to be independent of the text-book; not only must he have investigated the subject more fully than his pupils' books give him the means of doing, or his capacity would enable him to do; not only should he have an ample treasury of thought and information from which he may draw facts and illustrations when before his class, but his classes must be studied with reference to the adaptation of his instructions to their individual condition and wants. As no two classes in Arithmetic or Latin are precisely alike in the capacity and attainments and mental habits of their members, so the judicious teacher's methods of instruction will vary with each different class.

The labor of this preparation for the school-room is greatly increased by the variety of studies in which our teachers have to give instruction. Not unfrequently does the teacher meet, at different hours of the same day, classes in the common English branches, the higher mathematics, the sciences, and perhaps Latin and Greek. To be fresh for each of these recitations, so as to electrify the minds of his pupils from his own freshly charged mind, requires no small amount of study.

And, then, too, there are general exercises, and familiar lectures, by means of which he may do much to increase the knowledge and quicken the thought and enthusiasm of his school. To be sure of making these attractive and instructive, direct preparation must be made for them.

2. The condition and wants of his school must be studied. Judiciously and faithfully to train one child, directing his studies and watching over and giving a character to the unfolding of his mind, is a task from which more than man's wisdom and skill and patience might well shrink. But if, instead of one, we have twenty, or fifty, or a hundred children under our care, for whose education we are responsible—of every variety of disposition and capacity, and subject to all kinds of home and out-of-school influences—the greatness and importance of our work hardly admits of exaggeration, and renders necessary on the part of the teacher, not only an accurate knowledge of the mental and moral powers, and of human nature, and much prudence and good judgment, but much *study* of the char-

acter of each individual pupil, and the methods of discipline best adapted to his case. This boy hates study—how can he be made to love it? That one is careless and heedless, and is continually going astray by reason of his negligence, while he really means well—how shall he be made watchful over himself, and a constant and successful well-doer? That young lady is thoughtless and giddy—has taken scarcely the first step toward the acquisition of a right habit of application; under the influence of what motives and appliances may she be transformed into an earnest, faithful, thoughtful scholar, and come to give promise of a womanhood that shall adorn and bless society?

Or to take an illustration from the general arrangements of school, how shall whispering be checked and banished from school? How shall tardiness be made to cease? How shall the school be trained up to habits of strict, unhesitating veracity and honesty? How can an increased zeal in study be promoted? Such questions as these, and a thousand others, will continually suggest themselves to the mind of the true teacher. True, general principles, previously adopted, he may apply to many of them, and he must train himself to habits of quick ingenuity in the school-room; still, the school must be thought of and studied not a little by the teacher, when his mind is free from the immediate labors of the school-room. The philosophy of the mind must be studied; the educational book and periodical must be read and digested, and the best methods selected and judiciously adapted to promote desired results. The teacher who does most of this kind of work, will, *ceteris paribus*, be the most successful.

3. The teacher must give time regularly to the direct culture of his own mind. The studies referred to above, if faithfully pursued, can not fail to be rich sources of mental discipline to the teacher, and to give him a continually widening range of information and thought. But the teacher should, if possible, be doing more than this. Themes and investigations that may be in advance of the recitations and ordinary exercises of the school-room, should find a time to receive attention. The mind would thus be kept fresh and vigorous, and quickening energy and life would flash from it to fire the minds of pupils. Moreover, there is no knowledge and no mental power which the teacher may acquire, but it will come into ready use, and give a higher tone to his instructions. Besides, the mind would thus have more fully in itself that cheering consciousness of its own progress, which would stimulate to constant effort after increased fitness for its work.

4. Calling at the homes of his pupils, should find a place in every teacher's plan of labor. Fifteen minutes, a longer time if possible, spent at the home of your pupil, may give you a knowledge of his circumstances, and the influences to which he is subject, that may be invaluable to you. You may convert the parents into more intelligent and ready allies of yourself, and by your affability and words of kindness and prudent counsel, may increase largely the confidence and attachment with which you may be regarded by both children and parents.

5. The teacher must take care of his health. He must not neglect exercise and recreation. "The teacher can not well be without exercise, and usually a great deal of it. No other pursuit requires so much—no other is so exhausting to the nerves," and exercise, air, cheerfulness and sunshine are necessary to keep them firm.

6. The teacher owes duties, too, to his profession and to the cause of education, which will often make large drafts on his time and thoughts. The town, or county, or state association of teachers, requires his attendance and active efforts to aid its efficiency and usefulness. He must strive to reach the popular mind by every method that he can command—by his contributions to the local newspapers, or to the educational journal, or by the lecture that he is ready to deliver as occasions require. He must not shrink from any labor, if he may hope to influence and elevate the tone of professional or public sentiment and feeling with respect to popular education.

Fellow-teachers, are we doing all we can in our noble calling? Are we, by the use of strict system in the distribution of our time—by diligent study and patient thought—daily fitting ourselves to do more? Are we growing teachers?

To the Master we shall each give account. E. A. L.

NOTES ON THE ANTIQUITY OF SOME OF THE MECHANICAL POWERS.

No. I.

We live in an age abounding with the triumphs of genius and invention. Every element is pressed into the service of man, and agents whose power for centuries had remained unknown, now work incessantly at his bidding, in order to satisfy the innumerable demands of comfort, taste, luxury and fashion.

There are indeed "giants in these days," not men of mighty stature and prowess; but beings of wood and metal, with sinews of steel and muscles of iron, who walk the land and the sea, to use the quaint language of the Marquis of Worcester, with a semi-omnipotent power. By their means, space and time are partially annihilated, and commerce binds the world together by the strong bond of mutual interests. The luscious fruits of the tropics are piled in the marts of the north, and the crystal product of the severer climes cools the sherbet of the Mussulman. The tea of China affords a grateful beverage for millions of the outer barbarians of the west, and Yankee clocks in return, keep time for the Celestials. Other beings of this race, various in form and nature, and toiling for different ends, stand in the vast workshops of art, gifted with power, and at the same time filled with such a wonderful mechanism, as to be enabled of themselves to adapt their immense strength to the work to be performed, so that the energy which is seen at one time to drive a hundred looms, at another, is seen so divided and subdivided through a thousand iron nerves, that at last, scarcely more than sufficient strength remains to twist the slender fibers of the silky fleece. Our land teems with these untiring laborers, which like the spirits of the magicians, need not the support of mortal viands, and yet toil with ceaseless effort at the will of their masters.

But turning from the contemplation of these splendid triumphs of mind, we will go back to those early periods when the implements of the artisan and the principles of mechanics are supposed to have been little understood, and endeavor to trace, as best we may, the history of the development and combination of a few of the primary mechanical powers, and the uses to which they were applied.

That most, if not all of the simple machines were known in very early ages, is evident from the testimony of ancient writings, sculptures and paintings. Indeed, their advantages are so obvious, that we should almost suppose their want would lead to their immediate discovery.

But though the rudiments and alphabet of machinery were thus probably known in the infancy of nations, yet, as the necessities and wants of man were then few, and mostly supplied by his own industry or that of his dependents, it is needless for us at this period, to look for those wondrous combinations of art which embody in themselves the improvements of successive ages, and are the results of the accumulated efforts of many gifted minds. As society, however, advanced, and men began to feel at ease in their possessions, and

grasped for more, real and factitious wants were multiplied, and the inventive mind was required to minister to these new demands and caprices. Ambition in her career of conquests, called loudly upon science to grant her from the treasures of her might, engines of swift and complete destruction. Commerce taxed her energies for the means to pass in safety the vexed ocean, and to brave with impunity upon his own domain, the Lybian wind thick with tempests.

While upon the Egyptian plain, imperial pride bid her lift from its native bed the ponderous rock, bear it an eagle's flight toward heaven and fix it there, to cast down its shadow for forty centuries upon the burning sands of the desert.

Of the several primary machines, the *wedge* and inclined plane were probably the first invented. All edged tools are constructed upon the principle of the wedge, and without them nothing requiring skill could be constructed; in the household economy they were indispensable. The stakes must be cut to hold firm the fastenings of the tent, and the kid must be killed for food or sacrifice. The advantage afforded by the inclined plane, we should suppose would be obvious, as nature presents it on all sides to our view. The antediluvian, erecting his altar of stone upon the summit of a hill, would quickly perceive upon making the experiment, that it was much easier to roll his materials up the side of the hill than to carry them. The lever would perhaps next succeed; for since it must be cut before it could be used, a knowledge of the wedge in some form or other, must have previously been attained.

It is not improbable to conjecture that the wheel, as a locomotive power, was unknown till persons had become comparatively wealthy, and their property possessed a bulk and weight too great to be carried by themselves or servants, requiring vehicles or beasts of burden for transportation.

And when the fierce passions of our nature arrayed man against his fellow-man in deadly strife, the chieftains of the hostile tribes, disdaining the ignobler form of warfare, swept through the battle in their chariots of war, spreading terror and carnage all around them. But the wheel, as a stationary power, substituting the force of the elements for the labor of man, was long unknown as we shall see hereafter; yet there existed at very early periods, simple developments of the wheel, viz., the distaff and the hand-mill. Man would not discover his need of the pulley, until he wished to move or elevate weights through a considerable space; as in the erection of buildings, the management of vessels, and so forth: we may therefore suppose

that the pulley was not generally known until the human race, having clustered into communities, had advanced far in the career of civilization, or till men, weary of their old habitations, were hoisting the adventurous sail of discovery and seeking new abodes and golden spoils upon unknown shores.

Such is the order in which we may reasonably imagine the invention of these simple machines would arise, and the facts correspond for the most part, with this view. A very high antiquity is claimed for the tools of the artisan.

Pliny, a Roman writer, who was born in the twenty-third year of the Christian era, attributed to Theodorus, the Samian, the invention of the broad-ax, the auger and the turning-lathe. Other ancient writers demand for the Greek Perdix, the nephew of Dædalus, the invention of the saw, an honor which Pliny assigns Dædalus. And the historian Diodorus, who wrote in the time of Julius Cæsar, claims also for Perdix, the distinction of constructing the turning-lathe, the potter's wheel, and various other implements of art.

The period at which these two rivals existed is about 1400 B. C. But ingenious as the Greeks undoubtedly were, all the honors they claim do not belong to them; for, intoxicated with the pride of knowledge, they appear to have forgotten the country from whence they drew much of their information. To Egypt the wisest of the Greeks repaired for instruction, as to the oracle of wisdom, a nation then powerful, ancient and refined, when Greece was in the bud of being. These instruments, the invention of which is attributed by the above writers to the Greeks, were known and employed in Egypt as the common tools of trade, when the savage beast, or man scarcely less savage, had his lair in the classic shades of Helicon. Formerly, we knew but little of ancient Egypt, but the late discovery of the true method of interpreting the hieroglyphics of the Nile by the learned Champollion, opened a wide field for research, which has been diligently improved, and by no one more than by J. G. Wilkinson, Esq., from whose very able work on the manners and customs of the ancient Egyptians I have drawn copiously in reference to the subject before us. By his researches, it is now ascertained beyond a doubt, that at a very early period of their history, the Egyptians made use of the ax, hand-saw, adz, drill and chisel. Many specimens of the adz, together with saws and chisels, have been found at Thebes, a city whose splendor and power is celebrated by Homer, 1000 B. C., who flourished not far from the time of Solomon, and is said to have been so populous that it could send ten

thousand warriors from each of its hundred gates. But so ancient is this city, that the time of its ruin is lost in the dimness of antiquity. Among the sculptures at Thebes bearing the date of Thothmes III., (supposed by Wilkinson to be the Pharaoh who was cotemporary with Moses, B. C. 1591,) is one representing a carpenter at work with his tools around him, among which is the adz, and this date may be assigned to other sculptures amid the same ruins, where many other tools of the mechanic are delineated. Among the Assyrian sculptures at Khorsobad, are delineations of ships propelled by oars, showing that the Assyrians were acquainted with the lever. To these sculptures, Dr. Layard assigns an antiquity equal to that which is claimed for those of Egypt. But our information extends beyond the Egyptian and Assyrian era. The account given by Moses of the antediluvians, shows them not only to have been acquainted with the mechanic arts, but to have attained a high state of civilization, and several individuals are mentioned, distinguished as men of skill and genius. In the construction of the ark, no miracle was wrought. The mechanical skill possessed by Noah, or those he employed, was simply enjoined by the Almighty to be used according to a specified plan in the erection of a vast fabric for the preservation of the human species, and the various orders of animated nature. To construct such a vessel at the present day, would require all the skill of the shipwright, and every tool and implement of his art.

J. B.

VACATIONS.

No. II. The Theory.

Vacations are for the teacher; not for the children. Children properly taught, and often if improperly taught, do not need them. Six school hours out of the twenty-four, of which an hour is consumed in recesses, general exercises and the necessary machinery of the school, two or three hours in recitation, and the rest in study, do not leave the children fatigued at the week's end. No one can remember such a thing in his or her school experience, except it be in some exceptionably stimulating institution. Besides, the exercises, continually varied, are of precisely the most unfatiguing character possible. The active and volatile minds of children, of course could not bear the long and concentrated application to a single pursuit which is possible to a few only among men. But the changing succession of study and recitation, and

all the little periods of the daily school revolution, are especially adapted to their intellectual capacity.

But not only are vacations needless, as far as the pupils are concerned, but often absolutely harmful. The little people never remember too much. They do not always see the precise use of what they are learning. They study from a sense of duty, a desire of praise, or wish to please or to excel, but their acquisitions do not retain a hold in their minds as tenaciously as what is learned with positive delight and entire understanding. The partial or entire perfunctoriness of their attainments tends to make them careless to retain them. It is not the least difficult part of the teacher's work to keep fresh in his pupils' minds what they have studied before. The vacation unlearns at a much faster rate than the term teaches. It is easier to rub out a picture than to make one—to destroy than to build up.

The children, then, themselves, need no vacation whatever. But the teacher does. No occupation is so exhausting as his. No other has so universal a scope—none demands so full an exercise, or so imminently threatens the overtasking of the mind. The whole activity of the school must be sustained by deep drafts upon the energies of the teacher. He must spur on every mind in the right path, and restrain it from the wrong. He must fire up the unwilling or sluggish or ignorant intellect, with the infectious ardor of his own mental activity. He must pour out unceasing streams of sympathy with the weary, the discouraged and the fearful, and not with them only, but with the hopeful, the industrious and the successful, as well. The encouragement and help of his companionship—the vigor which the little souls so refreshingly derive from contact with the comparatively mature and steady strength of his, are as necessary to maintain and push on the advancing column, and to uphold the spirits of the bold, as to bring up the reluctant rear, and to infuse a necessary stimulus into the backward and the stragglers. Intellect, affections, motive powers, religious faculties, are all day in full tension. Nor does ease come with dismission, to the faithful teacher. Exercises are to be corrected; registers to be written up; next day's lessons to be prepared. And the teacher's own intellectual life must be maintained, too. He absolutely *must* do some study and reading for himself, unless he would have his mind change from a living fountain to a cistern, and from a cistern to a dead and stagnant pool.

In the furnace of such a work, every teacher will remember how he was more weary Tuesday night than Monday night, and Wednes-

day than Tuesday; how he ran down all the week, until the sweet peace of the Lord's day gave him strength and elasticity again; how every week the winding-up process was less complete, and the running-down more unstringing; with what desperate longings, as the term's end approached, he reached forward to the coming rest; under what an accumulating weight of labor—almost of disgust—he struggled out from under each day's load of labor, almost resolving that he would never teach through another term. It is the teacher, then, who needs the vacation; and the primary purpose for which he needs it is—rest. He needs it, besides, to travel; to read; to write; to think; to keep himself in some measure abreast of the world in which he lives.

But aside from these considerations, the vacation is the teacher's only opportunity, in most cases, to acquire acquaintance with the science and the art of his profession. It is the only time when he can attend the meetings of the teachers' associations and institutes—meetings invaluable to maintain and to raise the standard of school instruction.

Vacations, then, should be arranged with a view to the mental and physical refreshment and invigoration of the teacher. If this end is gained, there is no danger that the necessities of the children will not be satisfied. For this purpose, the vacations should be *simultaneous*, and at the *right season*.

Suppose that by tacit or express agreement, the principal vacations of the year were everywhere arranged for the month of August; perhaps including portions of July or September, or both. This would relieve both teachers and pupils from intellectual labor in that season of the year when it is most difficult. It would leave pupils in the rural districts at liberty for work. It would give the teacher his time in the best season to travel—to breathe fresh air—to

"Expatiate free o'er all this scene of man;"

it would enable teachers to attend their professional meetings; would benefit them by the knowledge there gained, and the advantages of a thorough organization, and their pupils and employers, by the consequent improvements in school discipline and instruction.

Communications to the Journal on the above subject are solicited. Even if embodying a mere statement of experience or opinion, they will not be less welcome or valuable. F. B. P.

ELEMENTARY INSTRUCTION,

FROM PROF. CAMP'S REPORT ON THE SCHOOLS OF NEW BRITAIN.

It has been the desire of those most interested in our common schools, that a high standard of intellectual culture should be attained. For this purpose the thorough study of the elementary branches has been recommended, as the foundation of a good education. By giving attention to fewer studies at a time, and having these thoroughly pursued, the teacher would be able to secure more of real intellectual discipline in the school; the real progress of the scholar would be greater, while he would be better fitted for the business and duties of active life, if obliged to leave school before the course was completed.

A few books read with care, or a few branches studied faithfully, thoroughly, till the principles are well understood, and the difficulties entirely mastered, will do more toward forming the habit of earnest thought, calm reflection and correct judgment, than skimming over a score of volumes, whether in reading or study. Too many studies are taken at a time, in part of the schools. Two or three branches besides the ordinary exercises in reading and writing, will be sufficient to employ the time of most pupils. Let these be studied till their principles are perfectly familiar, and then others taken in the same manner, and it will be found that there is sufficient time during the school years of the child, not only for him to become acquainted with the principles of studies usually taught, and their application to the practical business of life, but to extend this range much further into the field of physical and ethical science.

The schools in the first district are graded, and certain studies assigned by the Board of Visitors to each school. The advantages of the system of graded schools have been demonstrated, and the same results have been exhibited here, that have uniformly attended well taught schools, organized on this plan. There have been obstacles to contend with in the circumstances in which these schools have been placed the past year; yet the proficiency gained, and the standard in study attained, is much in advance of those schools not graded, though taught by competent instructors. The benefits of this system are more clearly developed each succeeding year, in the opportunities afforded for complete classification, and the adaptation of studies and exercises, to the age and attainment of pupils.

In the primary schools, the leading aim should be to cultivate the perceptive faculties, encourage observation and the habit of strict accuracy in the description of objects and the relation of facts, and to

educate the senses, especially the eye and hand. The cultivation of memory, either of terms or of facts, should receive attention in the proper place, nor should the culture and proper use of the imagination be overlooked.

The studies assigned to the primary schools by the Board are, "Reading easy prose, spelling, and analyzing common words of one and two syllables; distinguishing the names and use of marks of punctuation and Roman characters; the first elements of mental arithmetic; reading numbers of three figures and under, and the geography of Connecticut."

But for pupils of the age of many at present found in our primary schools, there must be, either in the family or at school, exercises that will precede these.

OBJECT TEACHING.

The Visitor believes that it would be best that the first instruction in these schools, include object teaching, the names of things, their qualities, forms, colors, uses, &c. A judicious teacher might accompany her pupils to the play-ground or to the field; and while the physical constitution was receiving the benefit of pure air and free exercise, the mind would be directed to observe and study from the golden alphabet of nature. Every plant and flower, shrub and tree, the fields, the streams, the beautiful landscape, the gay songsters of the air, the heavens above, the world around, would all have useful lessons, and in the hands of the skillful teacher, would do more to educate the mind and heart, than a hundred dull, monotonous lessons in a close school-room.

Thought would be awakened, and thought must be expressed in words. Hence, language must be taught. This would first be spoken language, the language of home and the heart. Words expressive of known ideas would be learned by their sound, and be connected properly into sentences. Many of the pupils of our schools have to be taught to talk properly; and the uncouth and sometimes vulgar terms found in the child's mouth, are to be changed for those that will give clear, intelligent expression to pure and beautiful thought. The teachers have for this reason, been requested to give particular attention to the free, unrestrained language of the play-ground, and correct all that was wrong in grammar or in sentiment.

FIRST STEPS IN READING.

The written language or printed character, must also be learned. Instead of requiring the little child to repeat the names of twenty-

six meaningless characters at one lesson, the successful teacher will select one, perhaps the *o*, and make it upon the blackboard; the child or class will make the same upon the slate, and return to the seat to study it, that is, to make it again and again, and also to notice its shape. One boy imagines he sees something which looks like it in an inkstand, another in a hat crown, perhaps still another in an orange or apple; while a pensive little girl thinks the bright sun and beautiful moon are both great *o's*. This is the first lesson. The next will perhaps be the letter *x*; this is made upon the board, its shape pointed out, and the class copy it on their slates. They recite it individually and in concert. These letters are then combined, forming the word *ox*. This word is an intelligent sign, or symbol of an idea. The teacher talks with the class about oxen, what they are used for when living, and what is done with them when killed. These two letters and the word given, constitute the next lesson. The children will be noticed making *o* and *x*; one has found the *o* in the rim and the *x* in the spokes of a wheel; another is sure the wood-sawyer had two *x's* for a saw-horse, while still another has found one in the corner of a rail fence.

At the third lesson, the letter *b* may be taken; this is made upon the board, its name given, and recited by the class. It is now prefixed to the word *ox*, *b o x*, and *box* is formed. Different kinds of boxes become the subject of remark. The size, shape, color, material, and uses, may be pointed out, and illustrated; all except the *box on the ear*, which will probably be unnecessary, if the little ones are interested. At the next lesson, the letter *f* is put upon the board, and also copied; when its name has been given, it is placed before the word *ox*, *f o x*, and forms *fox*. The teacher will, if possible, have a picture of a fox, or will make one herself on the board, to use as an illustration, while she relates a simple anecdote of the fox. For the next exercise the letter *x* is dropped, and *g* is substituted. This letter is different from the others, and will at first trouble the pupils in its formation. But as they have never yet had a lesson, which they could not master, they expect to succeed with this, and do, and are then the more pleased with their success, because they have triumphed over a difficulty.

The word is now *fog*. This leads into a new range of thought and method of explanation, but the ingenious, qualified teacher will interest her young friends for a few minutes, in talking about fog, dews and mist. She will explain the causes of each, why vapor sometimes passes into one and sometimes the other, and sometimes into clouds;

why fogs are seen from our hills, hanging over the river and valleys, some mornings, while it is clear on the hill-tops. Many questions may be asked and answered which will require the child to use his reasoning powers, and lead him to inquire for the reason of things. There will, of course, be no scientific explanations, no generalizing, as in after years, but a simple explanation of the most common facts, in every-day life.

The next letter may be *d:* two similar letters are now upon the board, *b* and *d;* these should be compared, the resemblance and difference carefully pointed out. By removing the *f* from *fog*, and placing the *d* instead, *d o g*, the word *dog* is formed, and this suggests a subject for a new conversation. At the next lesson, the curve of the *d* would be erased, and the letter is *l*, and the word *log*.

The mode of transporting logs down streams, as illustrated in some of our school-books, the building of log-houses, how, and why, and the changing of logs into boards, will profitably occupy a few moments, with this lesson, and thus the teacher will proceed to teach the letters of the language.

It is not expecting too much, perhaps, to suppose that one letter may be taught each half-day, and the others reviewed; so that in less than three weeks, children of usual intelligence would learn the twenty-six letters of the alphabet, with at least twice as many words, which are the names of objects, known to the pupil by observation or explanation.

This being accomplished, the pupils are advanced from the alphabet class to the reading class, but continue the study of simple words which are the symbols of real objects, constantly seen about them. These words can be placed on the blackboard, till learned by all the class. They will be combined into sentences, such as will express in the language of a child, thoughts about familiar things.

The analysis of words by sound, will also be taught, and new syllables, or combinations, if not complete or known words, may now be used. A clear, distinct enunciation should be required in every exercise, and then reading or spelling by sound, will prepare the pupil to become a good reader and speaker. Reading would be practiced with these exercises, and when the pupils are sufficiently advanced to call simple words readily, and follow in their own minds the thoughts on the printed page, books may be placed in their hands, from which they may be taught, and in which they may study.

ELEMENTS OF NUMBERS.

When a child has become enabled to call things in common use by their right names, he soon finds it convenient to express several things of the same kind by one word. Hence, the necessity of number.

The idea of number is conveyed to the child, first by the means of visible objects. A quantity of blocks or counters, or a numerical frame, is placed before him. He is taught to count and learns the names and value of different numbers. When these are understood, the characters by which they are represented are taught, and thus the pupil learns the alphabet of arithmetic.

The process of addition is now explained, as being a quicker method of obtaining a sum than counting. But this will first be illustrated with visible objects.

Subtraction is taught in connection with addition, and in a smilar manner. When these are well understood, and operations can be performed in them readily by the use of the counters, with abstract numbers and mentally, a question like the following should be proposed: "If there are five piles of counters, and six counters in each pile, how many counters would there be in all?" The pupil proceeds to put six down five times, and add together, or add the same mentally. The teacher explains a shorter way, by writing the six once, and putting five under it, to signify how many times it is to be taken. She would say to the pupil, "If we only knew how much six taken five times would be, we could put it down and have the answer at once." The pupil observes that it will save time and labor, and is interested to know how. The process is explained to him by means of the numerical frame; perhaps the book is shown to him containing the multiplication table, and he is very glad to learn it.

Division follows subtraction in a similar manner. The question might be, "How many piles of counters will there be if we have fifteen counters, and put five in each pile?" The pupil, if well acquainted with subtraction, proceeds at once to work, by setting down fifteen and taking out five once for one pile, taking it twice and calling it two piles, and so on till the quantity is exhausted, when the number of subtractions will indicate the number of piles. He is taught a shorter method, and is told that this is division. In this manner the child will be thoroughly drilled in what are termed the ground rules of arithmetic. It is believed that proper and systematic instruction of this kind, in the primary and intermediate schools, will tend to make

quick and accurate scholars, and save much trouble from the teachers of higher departments.

GEOGRAPHY.

In connection with the studies of language and number, the pupil will be taught a knowledge of facts, such as are generally found in geography or history. These studies are also commenced by directing the eye to visible objects. The teacher begins with the child's own home or with the school play-ground. The class are taken into the school-yard or on to some eminence near, and the fences, trees, walks, &c., are pointed out, and an outline of them is made upon paper, with the pupils looking on. The principal objects are indicated by proper signs, and the class are told that this is a map; and the idea obtained would be far more correct than the one gained by studying from the book, that "a map is a representation of a whole, or a part of the earth's surface." The teacher and class now pass into the school-room; the map is transferred to the blackboard, by the teacher, and copied on slates by the pupils. The points of compass will be pointed out, and the direction of different objects taught. Additions to the map will be made of roads, streams, ponds, hills and fields, till it includes the whole district, and perhaps the whole town. A good map of the county would then be made, or obtained, and studied in the same manner. As the different places of interest, mountains, rivers and towns, were located, they would be described, and geographical definitions would thus be taught orally. Relations of facts and occurrences would be connected with the local and descriptive geography of the town and county, and the study of history is commenced. For a diversion, the globe would be introduced, and the shape of the world taught, by talking about it familiarly, leaving all scientific explanations and proofs for maturer years.

DRAWING, &C.

Drawing should be made an exercise very early in the primary school, for amusement, employment, and to cultivate the eye and hand. Every pupil should be provided with a slate and pencil, and taught how to use them properly. Singing should also be a daily exercise; not necessarily singing by note or by the rules of masters; but those simple songs and hymns that every child likes, which appeal to the heart and are pure in sentiment, should be introduced into every primary school. The training and development of the muscles, by various calisthenic exercises, would be important, as well as the cultivation of the affections and social virtues. The formation of

correct habits; order, neatness, regularity; the cultivation of good manners, kindness, gentleness and love; and the instilling of right principles, purity, regard for truth and right, are particularly the duties of the primary teacher.

UPON PHILOSOPHICAL EXPERIMENTS.

THE success of an experiment often depends upon *little things*, which are too frequently omitted in describing the manner in which an experiment ought to be performed. The writer therefore believes that it may be of some service to teachers for him to state in what mode he performs certain simple experiments in philosophy, and the cautions to be observed in securing success.

To inflame Spirits of Turpentine by Electricity.

Take a metallic cup or iron spoon, and after making it hot, place it upon the conductor of the machine. Now pour a small quantity of spirits of turpentine into the spoon or cup; so small that the heat of the metal will make the fluid very warm. Upon turning the machine the spirits of turpentine will become electrified, and can be inflamed by drawing a spark from it with the finger. There is a choice, however, as to the place where the finger is to be applied. If you endeavor to draw the spark from a spot where the fluid is deep, you may not at once succeed. It is much better to place the finger over the margin of the fluid where it is shallow, and the experiment then invariably succeeds. The two precautions to be observed in this experiment are: 1. To have the fluid warm. 2. To draw the spark from as thin a stratum as possible. Alcohol can be inflamed in exactly the same way.

To fire Gunpowder by Electricity.

An apparatus for firing gunpowder by electricity may be made by forming a kind of wooden cannon from a piece of hard, dry wood, (if the wood is baked it will be all the better.) The vent hole should pass directly through the cannon, a little above the bottom of the bore. Pulverize some dry powder of the finest quality, and ram it down tight into the cannon. Into each orifice of the vent now insert a wire, pressing them into the powder until they almost touch each other. Now place the cannon, thus prepared, upon some non-conducting substance, as a pane of glass. Next, tie to one of the wires a

quick and accurate scholars, and save much trouble from the teachers of higher departments.

GEOGRAPHY.

In connection with the studies of language and number, the pupil will be taught a knowledge of facts, such as are generally found in geography or history. These studies are also commenced by directing the eye to visible objects. The teacher begins with the child's own home or with the school play-ground. The class are taken into the school-yard or on to some eminence near, and the fences, trees, walks, &c., are pointed out, and an outline of them is made upon paper, with the pupils looking on. The principal objects are indicated by proper signs, and the class are told that this is a map; and the idea obtained would be far more correct than the one gained by studying from the book, that "a map is a representation of a whole, or a part of the earth's surface." The teacher and class now pass into the school-room; the map is transferred to the blackboard, by the teacher, and copied on slates by the pupils. The points of compass will be pointed out, and the direction of different objects taught. Additions to the map will be made of roads, streams, ponds, hills and fields, till it includes the whole district, and perhaps the whole town. A good map of the county would then be made, or obtained, and studied in the same manner. As the different places of interest, mountains, rivers and towns, were located, they would be described, and geographical definitions would thus be taught orally. Relations of facts and occurrences would be connected with the local and descriptive geography of the town and county, and the study of history is commenced. For a diversion, the globe would be introduced, and the shape of the world taught, by talking about it familiarly, leaving all scientific explanations and proofs for maturer years.

DRAWING, &C.

Drawing should be made an exercise very early in the primary school, for amusement, employment, and to cultivate the eye and hand. Every pupil should be provided with a slate and pencil, and taught how to use them properly. Singing should also be a daily exercise; not necessarily singing by note or by the rules of masters; but those simple songs and hymns that every child likes, which appeal to the heart and are pure in sentiment, should be introduced into every primary school. The training and development of the muscles, by various calisthenic exercises, would be important, as well as the cultivation of the affections and social virtues. The formation of

correct habits; order, neatness, regularity; the cultivation of good manners, kindness, gentleness and love; and the instilling of right principles, purity, regard for truth and right, are particularly the duties of the primary teacher.

UPON PHILOSOPHICAL EXPERIMENTS.

THE success of an experiment often depends upon *little things*, which are too frequently omitted in describing the manner in which an experiment ought to be performed. The writer therefore believes that it may be of some service to teachers for him to state in what mode he performs certain simple experiments in philosophy, and the cautions to be observed in securing success.

To inflame Spirits of Turpentine by Electricity.

Take a metallic cup or iron spoon, and after making it hot, place it upon the conductor of the machine. Now pour a small quantity of spirits of turpentine into the spoon or cup; so small that the heat of the metal will make the fluid very warm. Upon turning the machine the spirits of turpentine will become electrified, and can be inflamed by drawing a spark from it with the finger. There is a choice, however, as to the place where the finger is to be applied. If you endeavor to draw the spark from a spot where the fluid is deep, you may not at once succeed. It is much better to place the finger over the margin of the fluid where it is shallow, and the experiment then invariably succeeds. The two precautions to be observed in this experiment are: 1. To have the fluid warm. 2. To draw the spark from as thin a stratum as possible. Alcohol can be inflamed in exactly the same way.

To fire Gunpowder by Electricity.

An apparatus for firing gunpowder by electricity may be made by forming a kind of wooden cannon from a piece of hard, dry wood, (if the wood is baked it will be all the better.) The vent hole should pass directly through the cannon, a little above the bottom of the bore. Pulverize some dry powder of the finest quality, and ram it down tight into the cannon. Into each orifice of the vent now insert a wire, pressing them into the powder until they almost touch each other. Now place the cannon, thus prepared, upon some non-conducting substance, as a pane of glass. Next, tie to one of the wires a

piece of *wetted* twine, about eight inches long, the other end of the twine being fastened to a chain, which is in connection with the outside of a four or six quart Leyden jar. Now taking this jar in the hand, and keeping the twine and chain insulated, touch the knob of the jar to the other wire in the cannon; the electric circuit will be thus completed, and the powder will most generally explode. The points to be observed in making this experiment are the following: 1. The material of the cannon must be a non-conductor. 2. The powder must be dry, pulverized, and of an excellent quality. 3. The whole apparatus must be insulated. 4. It is indispensable that a short piece of *wet* string form part of the electric circuit. 5. The ends of the wires in the powder must be at a proper distance from each other; this distance about the tenth of an inch, but varies with the quantity of electricity on the Leyden jar employed. It is impossible to fire the powder if water does not in some way form part of the circuit. The performer of this experiment must not be discouraged if he does not succeed the first time; and the precautions to be observed are numerous.

To disperse Sealing-Wax by Electricity.

Tie upon the conductor an iron spoon in an inclined position, and place sealing-wax within it. Melt the sealing-wax with a spirit lamp, and then set it on fire. When it runs blazing over the edge of the spoon, blow out the flame, electrify the sealing-wax by turning the machine, and hold at a short distance from the wax a sheet of pasteboard. As the hot wax runs over the edge of the spoon, the streams separate into the finest threads, covering the surface of the pasteboard to which they are attracted. In a proper light, the filaments, as fine as spider's webs, will be seen streaming out to the extent of three or four feet.

J. B.

The ancients ventilated their tombs, while we of the nineteenth century have but just begun to ventilate our houses.

One inch of the finest muslin that can be manufactured now contains 160 threads, but a piece of cloth has been taken from a mummy with 500 threads in one inch.

Education is the cheap defense of nations.

REFLECTIONS ON THE "BATTLE OF LEXICON."

DID you never, after a busy first or second day of a new term, sit down at evening, longing for rest, while a pile of "examination papers" is looking full in your pale, tired face, imperiously demanding attention? Do you remember how nervously your eye and pencil darted over the various wisdom of the new comers, indicated in chirographical characters, utterly defiant of all professor's rules? how every blind, stupid answer was a fresh torment to your already tortured brain, while all brief, scholarlike productions were greeted with a satisfaction that the trembling writers would have rejoiced to behold? And, tired and worn as you were, did you never light on some ridiculous freak of an unfortunate pen, or more unfortunate brain, which set before you, in an aspect so irresistibly ludicrous, a grave, weighty truth, that your compressed mouth and rigid features gave way, you yielded to the half unwelcome influence, and sent the elongated visage, for the moment, to the winds? You say "Yes." Then you will sympathize with me. A few nights since I brought such a tired head and heart home, and in a misanthropic mood, shut myself up with my papers, resolved to meet my fate with becoming resolution. Page after page had been nervously overlooked, and hurried jottings made with the unsteady pencil. My eyes grew weak and weary. I had reached the History: *Question*, "What was the first battle in the War of the Revolution?" *Answer*, "The battle of *Lexicon*."

I threw down the pen and laughed. "Yes, the '*Lexicon*' battle," thought I, growing serious again, "fought in a war as truly revolutionary as ours of patriotic memory." Then there seemed to appear before me, the bloodless, inky field whereon brave Dr. Johnson marshaled his stalwart bands, fain to put to flight the nondescript horde of barbarisms which had swept over the whole field of English literature. The stern, iron man led his gallant troops to the contest, and bravely fighting at their head, made terrible havoc among the enemy, while leaving few of his own soldiery dead on the field.

And this was not the last, for as the star of one leader went down, another rose, and still the battle raged. Walker, and Lowth, and Knowles, and Smart, and Worcester, and our Connecticut Webster, the Napoleon of them all, have drawn up their forces in hostile array, going out like experienced generals, to attack and repulse the often routed enemy. Sometimes, indeed, as in the old Roman days, feuds have arisen among the rival leaders, involving them in fierce though

bloodless *Lexiconic* conflicts; but notwithstanding these, the wide banner of success is yet wider unfurling over the increasing host of triumphant partisans of literary light and freedom.

And we reap the fruits. Quietly sitting under our literary "vine and fig-tree," we can bring all warring, insubordinate words, to the stern Worcesterian or Websterian standard at our elbow. Neither we nor ours need touch one weapon of war.

Here I remembered my examinations, thus far blissfully forgotten. *Question*, "What gulfs around Europe?" Glancing at a page before me, I read, first and foremost on the list, without capital and dotless—"the gulf of lions." The thread of my reverie was rudely severed; sadder, if not wiser, I bent to my work, while before my aching eyes, floated visions of *a battle yet unfought*, but whose signals I could discern in the dim distance of my coming term. I foresaw another "*battle of Lexicon.*"

EDITORS' TABLE OF BREVITIES.

"STAND up to make a bow, for here comes the man who always says 'Good morning' and 'How do you do?' to us." Thus spoke a little girl to her still smaller brother, of whom she had charge, as we were hurrying along toward them, a few mornings since. And the little woman tugged away at the little fellow, and helped him square up on to his feet, in season to greet us with two of the sunniest smiles and sweetest salutes that we ever received.

About a year since, we were approaching a club of boys, nearly all of whom were the sons of foreigners, and just of the age to be rude and unmannerly. They were eagerly engaged in play, and that too of the rudest and most tumultuous kind. As we came suddenly upon them, we noticed one of the eldest, hitting his neighbor with his elbow, and caught this appeal, uttered in a scarcely audible voice: "Boys, here's the teacher who always bows to us." As soon as said, every boy of them dropped his noisy sport, faced around, and with the most perfect gracefulness, made his bow, and passed a gentleman's salutation.

Teacher, a simple "Good morning," or "How do you do?" whenever and wherever you meet a child, will do two parties good. Politeness, which can not be taught by rules, is, still, most effectively commended and secured through the persuasive power of example. H.

Resident Editor's Department.

SCHOOL REPORTS.

The Annual Report of the Board of Visitors of the School Society of New Britain, for 1852–53. Hartford: Press of Case, Tiffany & Company.

This is a document which deserves special notice and commend ation. It is a handsome pamphlet, printed and put up in the form and style of this Journal, and contains the same number (32) of pages.

It embraces a brief general report by the Chairman of the Board, Rev. S. Rockwell, and a very able, interesting and practical report in detail of each school in the society, by the Acting Visitor, Prof. David N. Camp, a gentleman well known as an efficient and earnest advocate of the cause of public instruction in this State, and as a faithful and successful instructor in the State Normal School. This report reflects honor upon the head and the heart of its author, and the people of New Britain may well be proud of it. A copy of it is placed in every family in the society, where we doubt not it will awaken a new interest in the education of the rising generation, and prompt to greater efforts for the improvement of the schools.

We most sincerely wish that copies of this report might be scattered all over the State, not only to show what New Britain has done to establish a system of graded schools, but that other societies might be induced to *imitate this excellent example of printing the report of the Acting Visitor.* Let every teacher, as well as every other person desirous of improving our schools, urge the *printing and circulation* of reports. Let it once be tried and the practice will never be abandoned. The people will sooner give up their almanac, than dispense with it.

From this report we transfer, with pleasure, to the pages of our present number, some valuable suggestions on the subject of *Primary Instruction*, a subject of great importance, though hitherto quite too much neglected. We commend the extract to the careful perusal of all who may be in any degree responsible for the first steps of instruction in our schools.

HOW WE CAN USE THE PRESS.

A State educational journal must be sustained. So says every intelligent, "*live*" teacher, and every such a one is ready to use his pen and his money to aid in the work. But we can not by this means reach all the *people*, and thus mold the public opinion aright on the subject of common school improvement. How can we do this? We answer, by using the columns of the newspaper press.

So far as our knowledge extends, there is not a paper in the State that is not ready and willing to publish communications on the subject. It is our duty, fellow-teachers, to furnish these communications. A few laborers have already entered this useful and important field. "Normal" has done good service through the Derby Journal and the Union. Others have operated to some extent through other channels. We are highly pleased to learn that our colleague, E. A. Lawrence, Esq., has engaged to contribute regularly to the columns of the Stamford Advocate. An interesting article from his pen on the Cost of Public Schools, we hope to find room for in our pages.

In announcing this arrangement with the Advocate, he says:

"In this column it is proposed to invite the attention of the readers of the Advocate, from week to week, to brief articles, original and selected, on the subject of education and kindred topics,—specially to the interests of public schools and the duties of citizens, parents, teachers and pupils as related thereto."

Who will follow this good example?

EDUCATION IN DANVERS, MASS.

A TOWN THAT IS A TOWN.

THE population in 1850, was 8,110, and the valuation of property $3,312,779.10. In 1852, the number of scholars of the legal age, (between five and fifteen,) was 1,953, and the appropriations for school purposes amounted to $9,363.00, or $4.79 for each scholar. Of this sum, $8,788 was raised by a tax on property. The average wages per month of male teachers, was $45; of female, $12. There is no academy in the town, and the whole number of scholars attending private schools does not exceed 120. It has two free English and Classical High Schools, in which scholars are fitted for college. This enterprising and enlightened town employs a Superintendent, with a salary of $1,000, who devotes his whole time to the supervision of schools. The gentleman who occupies that post is Charles Northend, Esq., author of the "Teacher and Parent," who is well known as a successful teacher, and a sound educator.

WHAT IS DOING IN CONNECTICUT FOR THE IMPROVEMENT OF SCHOOLS.

GOVERNOR SEYMOUR.

We are ready to confess that we do not know to what better use a portion of the space under this head can be appropriated than that of exhibiting to our readers the noble stand in relation to the subject of popular education, which our late excellent Chief Magistrate maintained during the past year.

Though rather late in the day, as by himself frankly confessed, in applying the democratic doctrine of progress to educational interests, there is no reason to doubt that he is now an earnest and devoted friend of the cause. "Whether in office or out," said he to the writer, about one year ago, after witnessing the exercises and operations of the Normal School, "I give you my word that I shall stand by you in the support of this Institution, and aid, as I may be able, in the improvement of our schools." And he has been as good as his word. The performance has come quite up to the promise.

He has not hesitated to give to the cause both his personal influence and his official authority. He has even put his hand into his pocket, as will be seen below, and contributed 'material aid' from his private means.

Nothing but urgent business in connection with his foreign mission, prevented him from attending several of the Teachers' Institutes, last autumn. It is matter of sincere regret with him that his residence abroad puts it out of his power for the present, to coöperate with the friends of education in the State, in the work of improving our schools. That we have his cordial sympathy and best wishes for our success, we may be assured, and he will doubtless be highly gratified with any intelligence of our progress, which may reach him at the court of the Czar.

When we consider Governor Seymour's great personal popularity, in the State, together with his political antecedents and relations, the firm and decided ground he has taken in favor of liberal legislation on the subject of common schools, is a very cheering omen.

That his successor brings into office the same hearty good-will to the cause, is another fortunate circumstance, and it is to be hoped that no man, who is not known to be sound on this subject, will ever be put in nomination by any party, for the gubernatorial office. Every friend of education who has a vote to give, ought to demand this.

The Governor's Remarks at the last Anniversary of the Normal School.

"At the close of the exercises, Governor Seymour addressed the school and the audience in a feeling and eloquent manner, and expressed the great pleasure he had taken in the exercises of the day, which he pronounced equal to any which he had heard at the commencements of any of the older and higher literary institutions of the State. The reading and speaking he had never heard excelled amongst the same number of graduates anywhere; and he congratulated the State on the accession of even this small number of accomplished teachers—the first fruits only of the abundant harvest of good which the common schools, and through them the entire people of Connecticut, will yet reap from the endowment of this institution. This school has now taken its place among our permanent educational institutions, and he congratulated his friend, the Superintendent of Common Schools, the companion of his own school days, on the late but sure prospect of seeing his many labors in behalf of the professional training of all who aspire to teach the children of the people in the common schools, and his persevering efforts, through good report and evil report, in spite of public apathy and unreasonable opposition, to make these schools cheap enough for the poorest and good enough for the best, crowned with triumphant success. Though late in giving his own attention to this subject, he was now satisfied that the true way of improving our schools is by improving our teachers, and paying them a fair compensation for their services. If the general government can spend one hundred and fifty thousand dollars a year to educate and train officers to lead the armies of the country, and engineers to direct, with unerring aim, ball and shell on their errand of destruction, surely our own state governments can expend money as liberally in training teachers for their beneficent work, and in providing universal education, which is the 'cheap defense of nations.' In office or out of office, at home or abroad, the Governor declared himself an advocate of a liberal system of public instruction, and the steadfast friend of this institution, which he looked on as an indispensable feature of such a system."

Donation to the Normal School.

The Governor was particularly pleased with the rhetorical exercises of the pupils of the school, and previous to his departure for Europe, placed in the hands of the Principal, the sum of fifty dollars, to be expended in prizes for the best performances in reading, declamation and composition, at the next anniversary.

We copy the following from Governor Seymour's last Annual Message to the Legislature.

The School Fund.

"In considering the object to be attained by the School Fund, it has been too much the custom to look at it as a whole, without any reference to the avails, and seeing a fund to the amount of upward of two millions of dollars set apart for school purposes, the presumption has been that nothing further

was necessary to sustain the schools of the State. But when the attention is turned from the principal to the interest derived from that investment, which has never divided over $1.50 to a scholar, and which there is no reason to believe will ever reach that sum again, it is manifest enough that something more will be required to give a new impulse to the system which lies at the foundation of everything solid and valuable in our free institutions.

"No one who recalls with pride the self-sacrificing spirit of the people of this State, as long ago as the time when they first conceived the idea of creating a fund for school purposes, can for a moment harbor the thought, that if they had never taken that step, they would have permitted the object they had in view to be lost for want of the necessary means to secure it. On the contrary, it is highly probable they would have borne any amount of tax for the benefit of those into whose hands, as one generation succeeds another, the tables of the law are to be given. And this is rendered more certain from the fact that, in States where there has been no School Fund, or only a small investment for the benefit of public schools, the people have taken the burthen of it upon themselves, and borne aloft with a noble patience and intrepid resolution which no obstacles could withstand, the cause of popular education, which, next to that of pure religion, is confessedly greater than any other that can be named.

"With respectful deference to the opinions of those who do not see the necessity for any additional legislation respecting the system which prevails here, what little attention I have been able to give to the subject, has led me to a different conclusion. The true course to be adopted in such an emergency, is apparent enough from the facts which a free discussion of the subject for several years past has elicited, and with this general view of a question of engrossing importance, I again submit it to your candid consideration."

The State Normal School.

"For the purpose of providing for a higher degree of instruction, together with a more uniform and improved plan of school-teaching than has been previously prescribed, the Normal School was established. Though not favorable to the plan at the outset, more intimate acquaintance with the purposes and practical working of the school for teachers, has convinced me of its merits and importance, and produced in my mind the conviction that it is worthy of the future support of the State. It can hardly be considered an experiment, for in other parts of the country where this kind of instruction has been introduced, the most beneficial results have followed. Having made it a part of my duty to visit the school occasionally during the year, I can speak from personal knowledge of the skill with which it is managed by the experienced and able public teacher who has recently been placed at its head, and who, together with his associates in the work, deserves the sympathy and encouragement of the friends of education generally."

A Scientific School.

"Having provided for a system of common schools, through the instrumentality of a fund set apart for that purpose, and taken the first step toward the training of teachers, to take a part in the great work of imparting wise and wholesome instruction to the pupils who fill our schools, I shall make no apol-

ogy for the suggestion that at a future day, it may be deemed advisable perhaps, to give encouragement to some feasible plan for establishing a seminary of a higher grade—one which shall reflect the main features of the common schools, and provide for the further instruction of those pupils who may desire to ascend a step higher, by making the study of the practical sciences, agriculture and the mechanic arts, a part of the system, to which might be added, civil engineering, and the practice of the military art, constituting as a whole, a complete education for the American citizen.

Letter to Mr. Yeomans.

It is due to the Governor to state that he went to Columbia to attend the Institute, but owing to some mistake in the time, he was there on the day before the session commenced. The *Italics* are his own, and they deserve special attention. We hope this letter will be copied into the columns of every paper in the State.

"State of Connecticut, Executive Office,

"Hartford, Oct. 7th, 1853.

"My Dear Sir:

"I am obliged to deny myself the pleasure of meeting with you to-night, at the closing session of the Teachers' Convention. A severe cold which I have taken, admonishes me to avoid going out much for a short time. I regret to make this excuse, having felt a strong desire to show my high regard for the cause which is now under consideration at your meeting, by saying a word of encouragement; leaving to others, as I must do, the noble work of bringing about great results.

"When I first came into this office, the subject was comparatively new to me. What little knowledge I had of the educational interests of Connecticut, was, I confess, somewhat tinctured with *the old idea*, that the *system of schools in this State could not be made better;* that on the whole it was *good enough* for all practicable purposes.

A little experience in public affairs soon taught me to discard such an idea, as pernicious in its character, and if encouraged, likely to become fatal to anything like improvement of the system. I have long been of the opinion that too much reliance has been placed on the 'School Fund.' Our citizens have thought it sufficient to keep up the schools to the *point* of *perfection*, when a glance only, at its annual dividends, shows conclusively, that something more is wanting; and until the people of the several towns take this matter in hand, and agree to *tax themselves* for the *further support* of our schools, as we have seen cheerfully done in other States, it will be in vain to hope for anything like that kind of progress, in this all-important matter, which the *age demands.*

"If I had time I should be glad to enlarge on this topic, but as I have not, I must content myself with expressing the hope, that the meeting in your place, and the meetings of a similar character which are soon to follow, will, through the praiseworthy efforts of those who are engaged in this noble work, be productive of the happiest results.

"I remain very truly,

"Your obedient servant and friend,

"THO. H. SEYMOUR.

"Hon. J. S. Yeomans, Columbia."

THE SOUTH-EAST CORNER.

Stonington.—Last autumn, during the session of the Teachers' Institute for New London county, in this town, at Mystic Bridge, the people at the Borough, after listening to a lecture on the improvement of schools, drew up and signed a petition to the selectmen to call a town meeting, to lay a tax on the property of the town, for school purposes, as the first step of reform. Hitherto the schools have been supported by the revenue received from the School Fund, eked out by a *per capita* tax on the scholars. The movement was encouraged by the wealthiest men in the town. The meeting was called. A tax of $800 was voted without opposition; and it was also voted to employ a lecturer to go from school to school, through all the eighteen districts of the town, for so long a time as such a mission should seem to be needed.

Mr. William S. Baker, so well known as an earnest and zealous laborer in the cause of common schools, not only in this State, but also in Rhode Island and Massachusetts, was engaged to perform this service. He is now laboring in that interesting field.

A correspondent in that town writes as follows:

"I have heard of you by our friend Baker, who is now doing a good work for Stonington. His labors will have the effect to wake up the minds of parents, teachers and scholars, to a lively and active interest in the school business. There are some devoted teachers in the town, *and some who are totally unfit for any kind of business.*"

Let the people of Stonington go forward in the course they have adopted, and next winter, the latter class of teachers mentioned by our correspondent, will not trouble them. They will seek some darker corner, where the light has not yet come, and the spirit of reform has not begun to stir.

THE SOUTH-WEST CORNER.

New Canaan.—The center district of this town has contracted for the building of a new school-house, forty feet square, and two stories in height. It is to be ready for use next May. The school will be graded. The Committee desire to engage a Principal.

At *Westport* and *South Norwalk*, movements are afoot to displace the old school-houses by new structures adapted to the graded system of schools. In each place, we understand, some $3,000 or $4,000 has been secured for the object.

"*Keep the ball moving.*"

CATALOGUE OF A LIBRARY.

A GOOD catalogue is to a library what alphabetical arrangement is to a dictionary. Suppose the words in Webster's Quarto Dictionary to be thrown upon the pages at random; who would be the better for its treasures of learning? They might as well, for all practical purposes, be buried in the grave with its author. The student engaged in the investigation of a subject, rejoices with exceeding joy when he falls upon a *good* catalogue or a *good* index. They open to him a sort of "air-line" road through the region he wishes to traverse.

A catalogue of the Cambridge (Mass.) High School, of great excellence, has just been published. Indeed, it has been pronounced by competent judges, the most perfect catalogue that has ever been published in this country. It was prepared as a labor of love, by Ezra Abbot, Jr., formerly a sub-master in the school.

It is an octavo volume of two hundred and thirty-nine pages, and is one of the finest specimens of American typography.

It is a *classed* catalogue, the different branches of human knowledge embraced in the library being arranged in thirty-one classes, these classes themselves being comprised in eight more general divisions.

The general divisions are as follows:

I. Science of Mind, and of Man in his highest relations.
II. Mathematical Science.
III. Physical Science.
IV. The Arts.
V. Language; with an Appendix.
VI. Works of Imagination and Fancy, Wit and Humor.
VII. History of Man in his high relations.
VIII. Encyclopedia and Polygraphy.

An alphabetical index at the end of the volume shows at once whether a particular work belongs to the library.

Appended is a list of the philosophical and other apparatus belonging to the school, prepared by Mr. John E. Horr, the present sub-master of the school.

The library of the Cambridge High School, which is catalogued in this volume, contains about *sixteen hundred* volumes, and is estimated at not far from $2,400. It was commenced by the present accomplished master of the school, Mr. Elbridge Smith, who gene-

rously presented for that object, a selection of books from his private library, to the value of $800. This donation enabled the city to avail itself of the patronage of the state, to an equal amount. Contributions of valuable books from individuals supplied the rest. Thus one of the best school libraries in the country has been collected, the value of which has been greatly enhanced by this *model catalogue*.

Educational Intelligence.

PUBLIC INSTRUCTION.

The United States Census, for 1850, shows the following facts in relation to school education in the United States:

Colleges.—In the whole United States and the Territories, there are 234 colleges, with 1,651 teachers and 27,159 pupils. Their total annual income is: from endowment, $452,314; taxation, $15,485; public funds, $184,549; other sources, $1,264,280—total, $1,916,628.

Public Schools.—Of public schools there are 80,991; of teachers, 92,000; of pupils, 3,354,173. Their total income is: from endowment, $182,594; taxation, $4,686,414; public funds, $2,574,669; other sources, $2,147,853—aggregate, $9,591,530.

Academies.—Of academies and other schools there are 6,032, with 12,207 teachers and 261,362 pupils. Their annual income is: from endowments, $288,855; taxation, $14,202; public funds, $114,798; other sources, $4,235,987—total, $4,653,842.

During the year 1850, there were in attendance at school, 4,089,507. Of these 4,063,046 were white, and 26,461 were free colored people. Of the whole number, 3,942,081 were natives of the United States, the remaining 147,426, were born in foreign countries.

Salaries of the Officers of the New York Free Academy.

The Principal, Dr. Webster		$2500
" "	as Professor	500—$3000
Professor Owen		2000
" "	as Vice Principal	500— 2500
Professor Gibbs		2000
" Docharty		2000
" Nichols		1750
" Benedict		1750

Professor Anthon	$1750
" Barton	1750
" Koerner	1500
Tutor Huntsman	1000
" Palmer	1000
" Silber	1000
" Sheldon	800
" Blankiron	800
" Hows	600

The whole time of the foregoing to be devoted to the service of the Institution.

The following to devote the time specified herein:

Professor Duggan	from	1 o'clock	to	4,	$1,000
" Koerner,	"	8¾	"	12,	1,000
" Morales,	"	8¾	"	11,	700
" Doremus,	"	8¾	"	11,	700
The Librarian,					250
The Registrar,					1,000
				Total,	$27,850

Conn. State Normal School.

The present session will close on the 9th of March. There will then be a vacation of one week, after which the second session of the winter term will begin. The number entered this term is one hundred and nine. Prof. Brocklesby, of Trinity College, is giving a course of interesting lectures on meteorology.

It is proposed next session to organize a *preparatory class* of those who wish to become teachers, but have not advanced sufficiently to obtain certificates of the visitors.

Education in Massachusetts.

Number of persons in the state between five and fifteen years of age,	202,880
Number of teachers in summer: males, 369; females, 3,973. Total,	4,342
Number of teachers in winter: males, 2,085; females, 2,483. Total,	4,568
Average length of public schools, 7 mo., 15 days.	
Average wages of male teachers per month, including board,	$37.26
Average wages of female teacher per month, including board,	$15.36

Amount of money raised by taxes for the support of schools, including only the wages of teachers, board and fuel, ...	$910,216.04
Amount of voluntary contributions of board, fuel and money, to maintain or prolong public schools, .	$39,778.87
Amount of money appropriated to schools, as income of local funds, ...	$37,174.63
Amount received by the towns as their share of the income of the state school-fund, ...	$41,558.71
Aggregate expended on public schools, for wages, fuel and superintendence, ...	$1,036,646.32
Amount raised by taxes, (including income of surplus revenue,) for the education of each child in the state, between five and fifteen; per child, . .	$4.54

The law requires each town to raise by tax, at least $1.50 per child, between five and fifteen, as a condition of receiving a share of the income of the state school-fund.

The Cost of the Public Schools of Boston.

The city of Boston appropriates yearly, about $330,000 for the support of public schools. It has invested in school-houses, about $1,500,000. The whole amount of money raised yearly, by taxation, for all its expenses, is about $1,200,000. Subtracting from this amount the $330,000 appropriated to educational purposes, it leaves about $870,000 to meet all the other expenses of the city. * *

Our school-houses are built at great expense. Those who have had the charge of their erection, have thought only, how could they best combine convenience, comfort, healthfulness and attractiveness. The furniture, the philosophical apparatus, the globes and maps, are all of the most approved kind, and nothing is asked of the city government, which is really conducive to the welfare of our schools, that t readily granted.

More than one-quarter of the whole tax of the city is appropriated to schools. The valuation of the city for the year 1852–3, was some $188,000,000. The amount taxed upon every dollar of property for education, was therefore some two mills. The population of Boston in the year 1852–3, was nearly 150,000, and if the amount appropriated to schools was raised *per capita*, the proportion of every man, woman and child, would be about two dollars. The number of voters in Boston is about 22,500. If this amount was divided among them, each poll would pay about fourteen dollars. The average number of pupils in our schools is not far from 23,000. The yearly cost of educating each child is therefore about fifteen dollars.

Report for 1853.

ITEMS.

Mr. Lorin Andrews, so well known as an able and devoted advocate of the cause of popular education in Ohio, and now President of Kenyon College, has been elected President of the Ohio State Teachers' Association.

Mr. George Peabody, of London, has made a donation of *two hundred dollars a year*, while he lives, to be awarded as Rewards of Merit to the pupils of the two high schools in Danvers, Mass., his native town. This liberal gentleman is author of the sentiment, "*Education: a debt due from present to future generations.*"

The number of deaf mutes in the Pennsylvania Institution for the Deaf and Dumb at the present time, is 139—73 boys and 65 girls.

Governor Seymour of New York in his recent message to the Legislature, recommends the separation of the office of Superintendent of Common Schools from that of the Secretary of State.

Last year the average wages of male teachers employed by the State of Pennsylvania was nineteen dollars and a quarter per month.

The amount of the New York school fund is $2,383,251.23.

NOTICES OF BOOKS.

A New History of the United States of America, for the use of Schools. By John Lord, A. M., author of a Modern History, &c. Published by Cowperthwait, Desilver & Butler, Philadelphia.

This is a new candidate for public favor, and its appearance is very prepossessing. In the matters of typography, paper and style of binding, it deserves commendation in these days of *shabby, cheap* school-books.

Comstock's Natural History. A capital book for the young. We hope the day will come soon when our Common Schools will furnish facilities for the study of every department of Natural History, and encourage the young to make collections both for school and private cabinets. We feel that we shall do a favor to our schools by calling the attention of teachers to this last but not least timely work, from the pen of Dr. Comstock. They will find in it much to stimulate their own observation, and much which they can use in interesting their schools. It is sufficiently scientific to be safe as a guide, as far as it goes, and sufficiently attractive to awaken an earnest and lively interest, even in the mind of an overworked teacher. Many an evening hour could be profitably spent by the teachers of our schools over just such a work as this, and the exercise, while furnishing valuable instruction, would also refresh and invigorate the mind of the teacher. We hope soon to see the remaining departments of Natural History as skillfully treated as the two classes examined in this work, when we feel that the series will constitute one of the very best series of school-books ever prepared on any subject taught in our schools. We, at least, recommend to teachers to examine the subject of this book, hoping that the day is near when our school committees will authorize its introduction as one of the branches to be examined in the common school. H.